

HARSHIT SOHANEY

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HIGHLIGHTS OF QUALIFICATIONS

A: Advanced, I: Intermediate, B: Beginner

- **Languages & Tools:** C/C++ [A], MATLAB [I], HTML/CSS [A], JavaScript [A], SQL [A], LINQ [I], Verilog (HDL) [B], AngularJS [I], Git [I], C# [A], JQuery [I]
- **Technical Skills:** Google Cloud Platform [I], Quartus II [B], Code-V [B], Microcontrollers [I], Object-Oriented Programming [A], Linux [B], .NET Development [B], STM32CUBE [I]
- **Personal Skills:** English & Hindi fluency [A], Project Management [I], Entrepreneurship [I], Public speaking [I]

EDUCATION

Bachelor of Applied Science, Major in Computer Engineering

University of Toronto, St. George

Sept 2020 – Apr 2025

- **Courses:** Engineering Design, Software Communication, Computer Fundamentals, Digital Systems, Linear Algebra
- **Activities:** Electrical & Computer Engineering Ambassador, Hart House Chess Club, Sponsorship Executive for UofTHacks IX - X, Events Director for Digital Society Collective, Learn AI Curriculum Content Lead, ECE Club Events Director

EXPERIENCE

Application Development Co-op

Softchoice Corp.

May 2022 – Present

Toronto, ON, CA

- Designing the frontend and backend for Single Page Applications (SPA) on the company portal using **.NET Core and MVC Framework**
- Optimized Keystone API logging tables with Object Relational Mapping (ORM) using **LINQ to SQL** queries to improve access time from 30 seconds to 2 seconds
- Implementing a dynamic sub-grid view to assist in determining development time and creating development tasks

ENGINEERING PROJECTS

Firmware, Optics - FINCH CubeSat Satellite

University of Toronto Aerospace Team

September 2020 - Present

University of Toronto, ON, CA

- Analyzed data sheets for **voltage translator units** and researched **bi-directional** data paths to pick an ideal microcontroller
- Configuring SD Card data transfer using an STM32H743 Developer Board and an Arduino Uno. Debugging the FatFs file system to manually transfer and receive data from the optical system
- Automating satellite to ground station communication to coordinate different commands by tracking TX and RX signals

GIS Mapping System

University of Toronto ECE297

January 2021 - May 2021

University of Toronto, ON, CA

- Developed a city mapping system using the OpenStreetMap database with **C++**. Improved speed by 98% by employing various strategies with data structure manipulation
- Applied algorithms such as **Breadth First Search, Dijkstra's, and A*** to optimize pathfinding and included various features to accompany the algorithms (directions, subways, search bar)
- Employed various algorithms to find an optimum solution to the Travelling Salesman Problem. Implemented heuristic algorithms such as **2-opt and Simulated Annealing** to improve the quality of result

Co-Creator - Air-ReCharging

Independent Project

March 2021 - November 2021

Toronto, ON, CA

- Researched a new **rechargeable battery** that uses the Earth's magnetic field to self-charge and power electric aviation
- Obtained **second place** at the ENACTUS UofT **Innovation Pitch Competition**
- Accepted into the **ICUBE LEAP Startup League** to improve our business model and move further with the venture by completing various worksheets and modules on startup entrepreneurship

Self Guided - Fake News Detection AI

Coursera

May 2020 - May 2020

- Trained a **LSTM** network using **Natural Language Processing** tools such as **tensorflow, gensim, nltk, pandas, keras**
- Gained an understanding of Machine Learning concepts and received a **100%** score on the final quiz